

the condition of education 2006



INDICATOR 14

Trends in the Achievement Gaps in Reading and Mathematics

The indicator and corresponding tables are taken directly from *The Condition of Education 2006*. Therefore, the page numbers may not be sequential.

Additional information about the survey data and supplementary notes can be found in the full report. For a copy of *The Condition of Education 2006*, visit the NCES website (<http://nces.ed.gov/pubsearch/pubsinfo.sap?pubid=2006071>) or contact ED PUBs at 1-877-4ED-PUBS.

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Academic Outcomes

Trends in the Achievement Gaps in Reading and Mathematics

Since the early 1990s, the achievement gaps in reading and mathematics between White and Black and White and Hispanic 4th- and 8th-graders have shown little measurable change.

The National Assessment of Educational Progress (NAEP) has assessed student reading and mathematics performance since the early 1990s. NAEP thus provides a picture of the extent to which student performance in each subject has changed over time, including the achievement gaps between White and Black, between White and Hispanic, and between low- and high-achieving students.

In reading, the achievement gaps between White and Black and White and Hispanic 4th-graders have fluctuated since 1992, but the gaps in 2005 were not measurably different from those in 1992. In 2005, at the 4th-grade level, Blacks scored, on average, 29 points lower than Whites (on a 0–500 scale), and Hispanics scored, on average, 26 points lower than Whites (see supplemental table 14-1). At 8th grade, there was no measurable change in the

White-Black achievement gap between 1992 and 2005, and little change in the White-Hispanic gap, though the gap decreased slightly from 2003 to 2005 (from 27 to 25 points).

In mathematics, the achievement gap between White and Black 4th-graders decreased between 1990 and 2005 (from 32 to 26 points). The White-Hispanic 4th-grade gap increased in the 1990s before decreasing in the first half of the 2000s, but the gap in 2005 (20 points) was not measurably different from that in 1990. Among 8th-graders, a similar trend existed in both the White-Black and White-Hispanic score gaps: increases occurred in the 1990s before decreasing to levels not measurably different from those in 1990. In 2005, the White-Black gap was 34 points, and the White-Hispanic gap was 27 points.

NOTE: National Assessment of Educational Progress (NAEP) scores are calculated on a 0–500 scale. Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin unless specified. The score gap is determined by subtracting the average Black and Hispanic score, respectively, from the average White score. Testing accommodations (e.g., extended time, small group testing) for children with disabilities and limited-English-proficient students were not permitted in 1990–94. Beginning in 2002, the NAEP national sample for grades 4 and 8 was obtained by aggregating the samples from each state, rather than by obtaining an independently selected national sample. See supplemental note 4 for more information on NAEP.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2005 Reading and Mathematics Assessments, previously unpublished tabulation (December 2005).

FOR MORE INFORMATION:

Supplemental Notes 1, 4

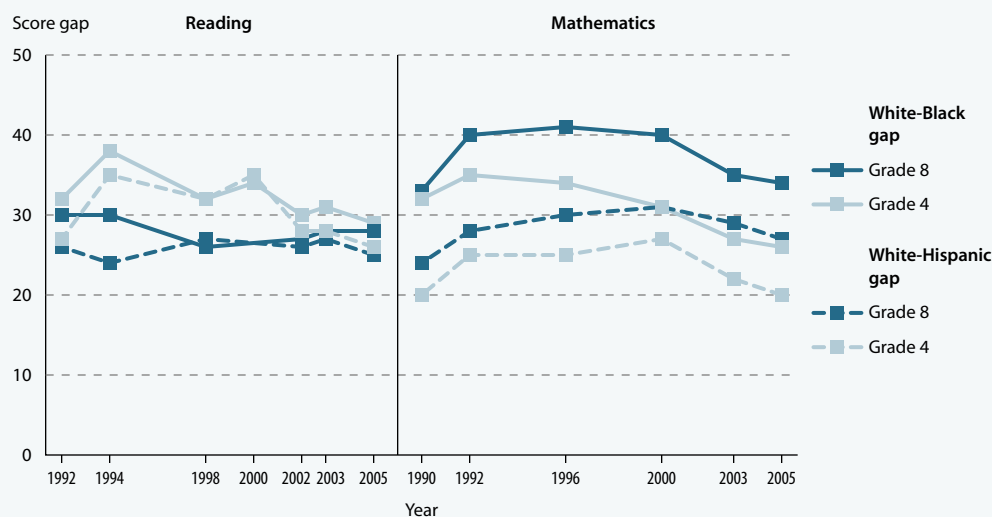
Supplemental Tables 14-1

NCES 2006-451

NCES 2006-453



ACHIEVEMENT GAP: Differences in White-Black and White-Hispanic 4th- and 8th-grade average reading and mathematics scores: Various years, 1990–2005



Trends in the Achievement Gaps in Reading and Mathematics

Table 14-1. White-Black and White-Hispanic gaps in average reading and mathematics scores, by grade: Various years, 1990–2005

Subject, race/ethnicity, ¹ and grade	1990	1992	1994	1996	1998	2000	2002	2003	2005
Reading									
White-Black gap									
Grade 4	—	32	38	—	32	34	30	31	29
Grade 8	—	30	30	—	26	—	27	28	28
White-Hispanic gap									
Grade 4	—	27	35	—	32	35	28	28	26
Grade 8	—	26	24	—	27	—	26	27	25
Mathematics									
White-Black gap									
Grade 4	32	35	—	34	—	31	—	27	26
Grade 8	33	40	—	41	—	40	—	35	34
White-Hispanic gap									
Grade 4	20	25	—	25	—	27	—	22	20
Grade 8	24	28	—	30	—	31	—	29	27

— Not available (tests not conducted in all grades for all years).

¹ Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin unless specified.

NOTE: The score gap is determined by subtracting the average Black or Hispanic score, respectively, from the average White score. Testing accommodations (e.g., extended time, small group testing) for children with disabilities and limited-English-proficient students were not permitted in 1990–94. Beginning in 2002, the National Assessment of Educational Progress (NAEP) national sample for grades 4 and 8 was obtained by aggregating the samples from each state, rather than by obtaining an independently selected national sample. As a consequence, the size of the national sample increased, and smaller differences between years or between types of students were found to be statistically significant than would have been detected in previous assessments. See *supplemental note 4* for more information on NAEP.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2005 Reading and Mathematics Assessments, previously unpublished tabulation (December 2005).

Trends in the Achievement Gaps in Reading and Mathematics

Table S14a. Standard errors for the differences in White-Black and White-Hispanic 4th- and 8th-grade average reading and mathematics scores: Various years, 1990–2005

Subject, race/ethnicity, and grade	1990	1992	1994	1996	1998	2000	2002	2003	2005
Reading									
White-Black gap									
Grade 4	†	2.1	2.2	†	2.2	2.1	0.6	0.5	0.4
Grade 8	†	2.0	2.1	†	1.5	†	0.9	0.5	0.5
White-Hispanic gap									
Grade 4	†	2.9	3.6	†	3.3	3.1	1.4	0.6	0.5
Grade 8	†	2.0	1.5	†	1.9	†	0.9	0.7	0.5
Mathematics									
White-Black gap									
Grade 4	2.0	1.6	†	1.8	†	1.5	†	0.4	0.3
Grade 8	3.0	1.7	†	2.2	†	1.5	†	0.6	0.4
White-Hispanic gap									
Grade 4	2.4	1.7	†	2.1	†	1.7	†	0.5	0.3
Grade 8	4.5	1.5	†	2.0	†	1.6	†	0.7	0.5

† Not applicable.
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2005 Reading and Mathematics Assessments, previously unpublished tabulation (December 2005).

Table S14b. Standard errors for the changes in the 4th-grade average reading scores between 1992 and 2005 and in the 4th-grade average mathematics scores between 1990 and 2005, by race/ethnicity and percentile

Race/ethnicity and percentile	Reading difference from 1992–2005	Mathematics difference from 1990–2005
White		
10th percentile	2.3	2.1
25th percentile	1.3	1.0
75th percentile	1.2	2.1
90th percentile	1.7	1.4
Black		
10th percentile	3.7	2.9
25th percentile	3.2	2.4
75th percentile	2.5	2.2
90th percentile	3.9	1.5
Hispanic		
10th percentile	4.8	2.6
25th percentile	3.8	5.1
75th percentile	2.5	3.9
90th percentile	4.7	5.9

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2005 Reading and Mathematics Assessments, previously unpublished tabulation (December 2005).

Trends in the Achievement Gaps in Reading and Mathematics

Table S14-1. Standard errors for the White-Black and White-Hispanic gaps in average reading and mathematics scores, by grade: Various years, 1990–2005

Subject, race/ethnicity, and grade	1990	1992	1994	1996	1998	2000	2002	2003	2005
Reading									
White-Black gap									
Grade 4	†	2.1	2.2	†	2.2	2.1	0.6	0.5	0.4
Grade 8	†	2.0	2.1	†	1.5	†	0.9	0.5	0.5
White-Hispanic gap									
Grade 4	†	2.9	3.6	†	3.3	3.1	1.4	0.6	0.5
Grade 8	†	2.0	1.5	†	1.9	†	0.9	0.7	0.5
Mathematics									
White-Black gap									
Grade 4	2.0	1.6	†	1.8	†	1.5	†	0.4	0.3
Grade 8	3.0	1.7	†	2.2	†	1.5	†	0.6	0.4
White-Hispanic gap									
Grade 4	2.4	1.7	†	2.1	†	1.7	†	0.5	0.3
Grade 8	4.5	1.5	†	2.0	†	1.6	†	0.7	0.5

† Not applicable.
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2005 Reading and Mathematics Assessments, previously unpublished tabulation (December 2005).